

REMARKS

In the Office Action of November 30, 2011, claims 1, 2, 4-8, 16, 17, 19-23 and 27-33 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,566,697 (issued to Fox; hereinafter “Fox”); claims 9 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fox; claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Fox in view of U.S. Patent No. 6,624,456 (issued to Fossum, hereinafter “Fossum”); claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Fox in view of applicant’s admitted prior art (hereinafter “AAPA”).

In response, and without conceding the merits of the rejections, independent claims 1, 16, 27, 30, 32 and 33 have been amended. See Application publication, par. 0082. Claim 29 has also been amended to correct typographical errors. Claims 6 and 21 have been cancelled without prejudice. No new matter has been added. Claims 1, 2, 4-5, 7-9, 16-17, 19-20, and 22-33 are now pending.

As amended herein, all independent claims clarify that the driver configuration unit sets the threshold channel potentials on the turned-on drain and transfer transistors higher than the potential which depletes the photoelectric converting element where “*a gate potential of the drain transistor is set higher than a gate potential of the transfer transistor.*” As explained in paragraph 0082 with reference to Figure 3 of the application publication, this circuit configuration is employed so that a “nearly complete transfer [of photoelectrons from the photodiode 219 is achieved] by raising the gate voltage of the drain Tr 215 during on higher than that of the transfer Tr 211.”

By contrast, Fox expressly requires an opposite configuration where the “signal applied to the TCK gate electrode [gate electrode of transfer transistor TCK in Figure 1] is made to be slightly *more positive* than the signal applied to the EC gate electrodes [gate electrode of drain transistor EC].” Fox, column 10, lines 46-48; Figure 1 (emphasis added). Thus, the gate potential of the drain transistor EC is *lower* than the gate potential of the transfer transistor TCK of Fox. All claims as amended herein, however, recite an opposite requirement resulting in a different circuit configuration.

Therefore, Fox does not teach a driver configuration unit where “a gate potential of the drain transistor is set higher than a gate potential of the transfer transistor,” as

recited in all independent claims. In view of the above discussion it is further respectfully submitted that the above-recited features, among others, result in different structural limitations directed to the configuration of the claimed apparatus and imaging device and are not mere “intended use.” Since Fox expressly requires an opposite configuration to that recited in the claims, it would be non-functional if configured in a different manner, and therefore it is not capable of being configured in a manner recited in the claims.

The remaining references of record do not cure the above deficiencies of Fox. Thus, none of the cited references, whether alone or in combination, teach or suggest a “driver configuration unit sets both the threshold channel potential on the turned-on drain transistor and the threshold channel potential on the turned-on transfer transistor higher than the potential which depletes the photoelectric converting element, *wherein a gate potential of the drain transistor is set higher than a gate potential of the transfer transistor,*” as recited in all independent claims.

All pending dependent claims include the foregoing feature, and therefore are also patentable for at least the same reasons.

In view of the foregoing, it is submitted that claims 1, 2, 4-5, 7-9, 16-17, 19-20, and 22-33 are allowable and that the application is in condition for allowance. Notice to that effect is requested.

If extensions of time are required, the extensions are hereby requested. If any additional fees are required for the prosecution of the application, please charge the fees to Deposit Account Number 19-3140 referencing work order number 09792909-5698.

Respectfully submitted,

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